

Week Report 3

Completed work for week 3

- [Lab 3](#)
- [Notes 1](#)

Practice 2: Accessing the bash shell

```
Tilix: oliurr724@cis106: ~  
1: oliurr724@cis106: ~  
oliurr724@cis106:~$ bash --version  
GNU bash, version 5.1.16(1)-release (aarch64-unknown-linux-gnu)  
Copyright (C) 2020 Free Software Foundation, Inc.  
License GPLv3+: GNU GPL version 3 or later <http://gnu.org/licenses/gpl.html>  
  
This is free software; you are free to change and redistribute it.  
There is NO WARRANTY, to the extent permitted by law.  
oliurr724@cis106:~$ _
```

Practice 3: Using the command history

```
Tilix: oliurr724@cis106: ~  
1: oliurr724@cis106: ~  
96 man echo  
97 bash ~/cis106/labs/lab3/lab3-script1.sh  
98 bash ~/cis106/labs/lab3/challenge_lab3.sh  
99 clear  
100 man echo  
101 bash ~/cis106/labs/lab3/challenge_lab3.sh  
102 git pull  
103 git add .  
104 git commit -m "lab 3 finished"  
105 git push  
106 bash --version  
107 date  
108 echo "hello world"  
109 uname -a  
110 history  
oliurr724@cis106:~$ !108  
echo "hello world"  
hello world  
oliurr724@cis106:~$ echo "hello"  
hello  
oliurr724@cis106:~$ !!world  
echo "hello"world  
helloworld  
oliurr724@cis106:~$
```

Practice 4: My first shell script

```
Tilix: oliurr724@cis106: ~  
1: oliurr724@cis106: ~  
oliurr724@cis106:~$ bash ~/scripts/hello.sh  
hello world  
I am learning linux  
this is my first shell script  
oliurr724@cis106:~$ _
```

Practice 5: Using man

```
Tilix: oliurr724@cis106: ~  
1: oliurr724@cis106: ~  
oliurr724@cis106:~$ uname -s  
Linux  
oliurr724@cis106:~$ uname -n  
cis106  
oliurr724@cis106:~$ uname -n && -o  
aarch64  
-o: command not found  
oliurr724@cis106:~$ man date  
oliurr724@cis106:~$ man df  
oliurr724@cis106:~$ man free  
oliurr724@cis106:~$ man clear  
oliurr724@cis106:~$ man history  
oliurr724@cis106:~$ free --giga  
total      used      free      shared  buff/cache   availabl  
e  
Mem:        4         2         0         0         1  
1  
Swap:       4         0         4  
oliurr724@cis106:~$ _  
-b, --bytes      Display the amount of  
                  memory in bytes.  
  
-k, --kibt       Display the amount of  
                  memory in kibibytes.  
                  This is the default.  
  
-n, --mebi       Display the amount of  
                  memory in mebibytes.  
  
-g, --gibi       Display the amount of  
                  memory in gibibytes.  
  
--tebi           Display the amount of  
                  memory in tebibytes.  
  
--pebi           Display the amount of  
                  memory in pebibytes.  
  
--kilo           Display the amount of  
                  memory in kilobytes.  
                  Implies --si.  
  
--mega           Display the amount of  
                  memory in megabytes.  
                  Implies --si.  
  
--giga           Display the amount of  
                  memory in gigabytes.  
                  Implies --si.  
  
--tera           Display the amount of  
                  memory in terabytes.  
                  Implies --si.  
  
--peta           Display the amount of  
                  memory in petabytes.  
                  Implies --si.  
Manual page free(1) line 74/205 57% (press h for help or q to quit)_
```

Practice 6: Using help

```
1/1 + [icons] Tilix: oliurr724@cis106: ~
1: oliurr724@cis106: ~
oliurr724@cis106:~$ free --help
Usage:
  free [options]

Options:
  -b, --bytes          show output in bytes
  --kilo               show output in kilobytes
  --mega               show output in megabytes
  --giga               show output in gigabytes
  --tera               show output in terabytes
  --peta               show output in petabytes
  -k, --kibi            show output in kibibytes
  -m, --mebi            show output in mebibytes
  -g, --gibi            show output in gibibytes
  --tebi               show output in tebibytes
  --pebi               show output in pebibytes
  -h, --human           show human-readable output
  --si                 use powers of 1000 not 1024
  -l, --lohi            show detailed low and high memory statistics
  -t, --total           show total for RAM + swap
  -s N, --seconds N    repeat printing every N seconds
  -c N, --count N      repeat printing N times, then exit
  -w, --wide            wide output

  --help              display this help and exit
  -V, --version        output version information and exit

For more details see free(1).
oliurr724@cis106:~$ whatis ls
ls (1)                - list directory contents
oliurr724@cis106:~$ whatis pwd
pwd (1)               - print name of current/working directory
oliurr724@cis106:~$ whatis apt
apt (8)               - command-line interface
oliurr724@cis106:~$ whatis sudo
sudo (8)              - execute a command as another user
oliurr724@cis106:~$ _

2: oliurr724@cis106: ~
--regex               show all pages matching regex
--wildcard             show all pages matching wildcard
--names-only           make --regex and --wildcard match page names only,
                      not descriptions
-a, --all              find all matching manual pages
-U, --update           force a cache consistency check
--no-subpages         don't try subpages, e.g. 'man foo bar' => 'man
                      foo-bar'

Controlling formatted output:
-P, --pager=PAGER      use program PAGER to display output
-r, --prompt=STRING    provide the 'less' pager with a prompt
-7, --ascii            display ASCII translation of certain latin1 chars
-E, --encoding=ENCODING use selected output encoding
--no-hyphenation, --nh turn off hyphenation
--no-justification, --nj turn off justification
-p, --preprocessor=STRING STRING indicates which preprocessors to run:
                      e - [n]eqn, p - pic, t - tbl,
g - grap, r - refer, v - vgrind
-t, --troff            use groff to format pages
-T, --troff-device[=DEVICE] use groff with selected device
-H, --html[=BROWSER]   use www-browser or BROWSER to display HTML output
-X, --gxditview[=RESOLUTION] use groff and display through gxditview
                      (X11):
                      -X = -TX75, -X100 = -TX100, -X100-12 = -TX100-12
-Z, --ditroff           use groff and force it to produce ditroff
-?, --help             give this help list
--usage                give a short usage message
-V, --version           print program version

Mandatory or optional arguments to long options are also mandatory or optional
for any corresponding short options.

Report bugs to cjwatson@debian.org.
oliurr724@cis106:~$ _
```

Practice 7: Using cheat

```
2/2 + [icons] Tilix: oliurr724@cis106: ~
1: oliurr724@cis106: ~
oliurr724@cis106:~$ cheat tar
# To extract an uncompressed archive:
tar -xvf /path/to/foo.tar

# To extract a .tar in specified directory:
tar -xvf /path/to/foo.tar -C /path/to/destination/

# To create an uncompressed archive:
tar -cvf /path/to/foo.tar /path/to/foo/

# To extract a .tgz or .tar.gz archive:
tar -xzvf /path/to/foo.tgz
tar -xzvf /path/to/foo.tar.gz

# To create a .tgz or .tar.gz archive:
tar -czvf /path/to/foo.tgz /path/to/foo/
tar -czvf /path/to/foo.tar.gz /path/to/foo/

# To list the content of an .tgz or .tar.gz archive:
tar -tzvf /path/to/foo.tgz
tar -tzvf /path/to/foo.tar.gz

# To extract a .tar.bz2 archive:
tar -xjvf /path/to/foo.tar.bz2

# To create a .tar.bz2 archive:
tar -cjvf /path/to/foo.tar.bz2 /path/to/foo/

# To list the content of an .tar.bz2 archive:
tar -tjvf /path/to/foo.tar.bz2

# To create a .tgz archive and exclude all jpg,gif,... from the tgz:
tar -czvf /path/to/foo.tgz --exclude='*.{jpg,gif,png,wmv,flv,tar.gz,zip}' /path/
to/foo/

# To use parallel (multi-threaded) implementation of compression algorithms:
tar -z ... -> tar -Ipigz ...
tar -j ... -> tar -Ipbzip2 ...
tar -J ... -> tar -Ipixz ...

# To append a new file to an old tar archive:
tar -rf <archive.tar> <new-file-to-append>
oliurr724@cis106:~$ _

2: oliurr724@cis106: ~
oliurr724@cis106:~$ cheat tar | pygmentize
# To extract an uncompressed archive:
tar -xvf /path/to/foo.tar

# To extract a .tar in specified directory:
tar -xvf /path/to/foo.tar -C /path/to/destination/

# To create an uncompressed archive:
tar -cvf /path/to/foo.tar /path/to/foo/

# To extract a .tgz or .tar.gz archive:
tar -xzvf /path/to/foo.tgz
tar -xzvf /path/to/foo.tar.gz

# To create a .tgz or .tar.gz archive:
tar -czvf /path/to/foo.tgz /path/to/foo/
tar -czvf /path/to/foo.tar.gz /path/to/foo/

# To list the content of an .tgz or .tar.gz archive:
tar -tzvf /path/to/foo.tgz
tar -tzvf /path/to/foo.tar.gz

# To extract a .tar.bz2 archive:
tar -xjvf /path/to/foo.tar.bz2

# To create a .tar.bz2 archive:
tar -cjvf /path/to/foo.tar.bz2 /path/to/foo/

# To list the content of an .tar.bz2 archive:
tar -tjvf /path/to/foo.tar.bz2

# To create a .tgz archive and exclude all jpg,gif,... from the tgz:
tar -czvf /path/to/foo.tgz --exclude='*.{jpg,gif,png,wmv,flv,tar.gz,zip}' /path/
to/foo/

# To use parallel (multi-threaded) implementation of compression algorithms:
tar -z ... -> tar -Ipigz ...
tar -j ... -> tar -Ipbzip2 ...
tar -J ... -> tar -Ipixz ...

# To append a new file to an old tar archive:
tar -rf <archive.tar> <new-file-to-append>
oliurr724@cis106:~$ _
```

Practice 1: Managing software

 practice 1 mng